

## CF83-E-F Government-Grade Fisheye Camera

### Expansive 180° Coverage with Detailed 12.5MP Resolution for Government Deployments



#### Overview

The CF83-E-F government-grade fisheye camera features a large 1/1.6" progressive CMOS image sensor and 12.5MP resolution for detailed image quality amid varying lighting conditions and inclement weather. The CF83-E offers wide-angle, 180-degree coverage for maximum visibility, yet is built to minimize classic fisheye distortion. The CF83-E-F also includes FIPS 140-validated encryption, has FedRAMP Ready status at the Moderate impact level, and is both TAA and FY2019 NDAA compliant – essential compliance criteria for government-grade deployments. The CF83-E-F is compatible with the standard Verkada Command platform, as well as Command hosted in AWS GovCloud.

The CF83-E-F also includes an onboard CV72S Ambarella processor for advanced analytics like AI-powered search, line crossing, and person of interest (POI) detection. The CF83-E-F offers five different viewing modes: digital pan-tilt-zoom (ePTZ), panoramic, 2-way, 3-way, and 4-way split, which make it ideal for providing overview coverage of large areas like open atriums, long corridors, and exterior building walls, all from a single install point.

The CF83-E-F is built with an in-house industrial design for durability and streamlined installation. It features a robust metal exterior with an IP66/67 weather rating and IK10 impact protection, ensuring reliable performance in harsh environments. The CF83-E F's design streamlines installation and large fleet deployments with features such as captive screws that remain attached to the mounting plate, a latch-based cable gland for easy PoE threading, a three-LED light status indicator, a built-in bubble level for precise alignment, and physical and digital mute switches to easily enable or disable audio.

#### Key features

##### Excellent image quality

- Large 1/1.6" progressive CMOS image sensor
- 12.5MP resolution
- 20 meters / 66 feet of IR range for nighttime viewing

##### Extensive coverage and monitoring

- 180-degree field of view
- ePTZ, panoramic, and split viewing modes for enhanced live monitoring of large areas

##### Government-Grade Security

- Meets the FIPS 140 standard, as validated by NIST
- FedRAMP Ready status at the Moderate impact level as designated by the Federal Risk and Authorization Management Program
- TAA and FY2019 NDAA compliant

##### Advanced analytics

- Onboard CV72S Ambarella processor enables people and vehicle analytics
- Person of interest (POI) alerts for proactive monitoring

##### Hybrid cloud architecture

- Onboard storage and processing helps reduce bandwidth consumption, and enables coverage at scale
- 30 - 120 days (512GB - 3TB) of onboard storage
- Redundant cloud backup and unlimited cloud-based archiving of footage

##### Durability and weather protection

- Robust metal housing
- IP66/67 weather rating and IK10 impact rating
- Operability between -40°C to 50°C / -40°F to 122°F



## CF83-E-F

### Tech Specs

#### Camera features

<b>Image Sensor</b>	1/1.6" Progressive CMOS	<b>Shutter Speed</b>	1/120 sec. to 1/32000 sec.
<b>Sensor Resolution<sup>1</sup></b>	12.5MP (3536 x 3536); resolution (3520 x 3520)	<b>Day/Night</b>	IR-cut filter for day and night function
<b>Lens Type</b>	Fixed	<b>IR Cut Filter</b>	Yes
<b>Focal Length</b>	1.7mm	<b>IR Range</b>	20m / 66ft
<b>Aperture</b>	F2.0	<b>Minimum Illumination</b>	0.009 lux @ F1.9 (Color) 0 lux with IR Illuminators on
<b>Iris</b>	Fixed	<b>Onboard Storage</b>	Capacity: From 512GB to 3TB Card: MicroSD, SDXC
<b>Field of View</b>	Horizontal: 180° Vertical: 180° Diagonal: 180°	<b>CPU</b>	Ambarella CV72S66

#### Standard video settings

<b>Compression</b>	H.265, H.264	<b>Historical Video Settings</b>	Adaptive quality <sup>1</sup>
<b>Frame Rate<sup>2</sup></b>	24fps	<b>WDR Technology</b>	120dB dynamic range, true WDR, dual exposure
<b>Live Streaming Settings</b>	High quality (HQ): Up to 4,500 Kbps (default) Standard quality (SQ): Up to 600 Kbps		

#### Standard audio settings

<b>Audio</b>	Supported	<b>Interface</b>	Built-in microphone
<b>Audio Capacity</b>	One-way audio	<b>Effective Range</b>	5m / 16ft

#### Power and network

<b>Power Input<sup>3</sup></b>	With IR: IEEE 802.3at Type 2 PoE+ Extended temperature range: IEEE 802.3at Type 2 PoE+	<b>Connectivity</b>	RJ-45 cable connector for network/PoE connection; 10 / 100 / 1000 Mbps
<b>Power Consumption<sup>3</sup></b>	With IR: 43-57V, 0.46-0.34A, 19.5W Without IR: 43-57V, 0.22-0.17A, 9.5W Extended temperature range: 43-57V, 0.58-0.44A, 24.8W	<b>RTSP</b>	RTSP 1.0 RFC 2326 Max concurrent streams: 2 Audio support: No

1. All our cameras record in "adaptive quality," capturing both standard (SQ) and high quality (HQ) streams. SQ video is stored up to the amount of retention specified by the customer. The amount of HQ video stored on the camera will depend on the amount of motion detected by the camera over time. To learn more, visit our website: <https://docs.verkada.com/docs/adaptive-quality-recording-whitepaper.pdf>

2. Frame rate can be adjusted by support.

3. Extended temperature range includes operating temperatures below -10°C / 14°F and assumes IR will be enabled.



## CF83-E-F

# Tech Specs

### General

<b>Operating Temperature</b>	-40°C to 50°C / -40°F to 122°F	<b>LED Indicator</b>	System power, status indicator, and debug indicator
<b>Humidity</b>	0 to 90%	<b>Warranty</b>	10 Years
<b>Certifications</b>	FCC, ICES, IK10 impact rating, IP66/67 weather rating, FIPS 140-2 validated, TAA and FY2019 NDAA compliant	<b>Included Accessories</b>	Screw packs, mount plate with leveler, cable sealing rubber for 6.5-7.5mm, conduit adapter, T10 security driver

### Mechanical

<b>Weight</b>	Camera: 1368g / 48.25oz Mount plate: 196g / 6.91oz	<b>Body</b>	Aluminum, plastic dome trim
<b>Dimensions</b>	Ø: 155.0mm / 6.10in, H: 76.2mm / 3.00in with mount plate Ø: 155.0mm / 6.10in, H: 69.2mm / 2.72in without mount plate		

### Dimensions



### Software capabilities

<b>Alerts</b>	Camera status, motion detection, people detection, vehicle detection, person of interest detection, crowd detection, AI-powered alerts	<b>Streaming and Storage</b>	Cloud backup, configurable retention days, selectable storage location, low bandwidth mode, timelapse, RTSP
<b>People Analytics</b>	People search, attribute search, face search, motion search, trajectory analysis <sup>4</sup> , selective face blurring, AI-powered search	<b>Sharing and Privacy</b>	Live links, privacy regions, audit log
<b>Vehicle Analytics</b>	Vehicle search, attribute search, motion search, trajectory analysis <sup>4</sup> , AI-powered search		

<sup>4</sup>. Trajectory analysis is supported in four-way split, panoramic, and ePTZ circle mode.



## Ordering Information

### CF83-E-F pricing

Model Number	MP <sup>1</sup>	WDR	Lens	IR Range	Onboard Storage	Maximum SQ Onboard Retention <sup>1</sup>	People/Vehicle Analytics	Cost (MSRP) <sup>USD</sup>
CF83-512E-HW-F	12.5MP	✓	Fixed	20m / 66ft	512GB	30 Days	✓	\$1,999
CF83-1TBE-HW-F	12.5MP	✓	Fixed	20m / 66ft	1TB	60 Days	✓	\$2,799
CF83-2TBE-HW-F	12.5MP	✓	Fixed	20m / 66ft	2TB	90 Days	✓	\$4,099
CF83-3TBE-HW-F	12.5MP	✓	Fixed	20m / 66ft	3TB	120 Days	✓	\$5,399

1. All our cameras record in "adaptive quality," capturing both standard and high quality streams. Standard quality (SQ) video is stored up to the amount of retention specified by the customer. The amount of high quality video stored on the camera will depend on the amount of motion detected by the camera over time. To learn more, visit our website: <https://docs.verkada.com/docs/adaptive-quality-recording-whitepaper.pdf>



## Ordering Information

### Video Security Cloud License pricing (New/Capacity Increase)

Model Number	Description	Cost (MSRP) USD
LIC-CAM-1Y-CAP	1-Year Camera License, Capacity Increase	\$219
LIC-CAM-3Y-CAP	3-Year Camera License, Capacity Increase	\$599
LIC-CAM-5Y-CAP	5-Year Camera License, Capacity Increase	\$999
LIC-CAM-10Y-CAP	10-Year Camera License, Capacity Increase	\$1,999
LIC-CAM-1Y-CAP-G	1-Year Camera License for Government, Capacity Increase	\$329
LIC-CAM-3Y-CAP-G	3-Year Camera License for Government, Capacity Increase	\$899
LIC-CAM-5Y-CAP-G	5-Year Camera License for Government, Capacity Increase	\$1,499
LIC-CAM-10Y-CAP-G	10-Year Camera License for Government, Capacity Increase	\$2,999

### Video Security Cloud License pricing (Renewal)

Model Number	Description	Cost (MSRP) USD
LIC-CAM-1Y-RNW	1-Year Camera License, Renewal	\$219
LIC-CAM-3Y-RNW	3-Year Camera License, Renewal	\$599
LIC-CAM-5Y-RNW	5-Year Camera License, Renewal	\$999
LIC-CAM-10Y-RNW	10-Year Camera License, Renewal	\$1,999
LIC-CAM-1Y-RNW-G	1-Year Camera License for Government, Renewal	\$329
LIC-CAM-3Y-RNW-G	3-Year Camera License for Government, Renewal	\$899
LIC-CAM-5Y-RNW-G	5-Year Camera License for Government, Renewal	\$1,499
LIC-CAM-10Y-RNW-G	10-Year Camera License for Government, Renewal	\$2,999



## Ordering Information

### Accessories pricing

Model Number	Description	Cost (MSRP) USD
ACC-CAM-SHIELD-1	Camera Weather Shield	\$79
ACC-MNT-ANGLE-1	Angle Mount	\$149
ACC-MNT-ARM-1	Arm Mount	\$99
ACC-MNT-CJBOX-1	Circle Junction Box	\$109
ACC-MNT-CLIP-1	Tile Clip Mount	\$99
ACC-MNT-CORNER-1	Corner Mount	\$199
ACC-MNT-PEND-1	Standard Pendant Cap	\$69
ACC-MNT-POLE-1	Pole Mount	\$209
ACC-MNT-UPEND-1	Umbrella Pendant Cap	\$79
INJ-POE-PLUS	PoE Plus (802.3at Type 2) Injector, GigE	\$129